

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

Claims 1-35 (Canceled)

Please add the following new claims:

36. (New) A non-linear amplifier circuit including:

an amplifier having an output;

a first feedback path from said output of said amplifier to a first point upstream of said amplifier; and

a second feedback path from said output of said amplifier to a second point upstream of said amplifier,

wherein at least one of said first feedback path and said second feedback path includes a non-linear impedance element.

37. (New) The amplifier circuit of claim 36 wherein said first point is separated from said second point by an impedance element.

38. (New) The amplifier circuit of claim 36 wherein said non-linear impedance element is a diode.

39. (New) A non-linear amplifier circuit including:
an amplifier having an amplifier input and an amplifier output;
a first feedback path from said amplifier output to a first point, wherein said first point is in electrical communication with said amplifier input; and
a second feedback path from said amplifier output to a second point, wherein said second point is in electrical communication with said amplifier input,
wherein at least one of said first feedback path and said second feedback path includes a non-linear impedance element.

40. (New) The amplifier circuit of claim 39 wherein said first point is separated from said second point by an impedance element.

41. (New) The amplifier circuit of claim 39 wherein said non-linear impedance element is a diode.

42. (New) A non-linear amplifier circuit including:

- an amplifier having an amplifier input and an amplifier output;
- a first feedback path from said amplifier output to a first point, wherein said first point is in electrical communication with said amplifier input,
- wherein said first feedback path has a first large-signal sinusoidal response; and
- a second feedback path from said amplifier output to a second point, wherein said second point is in electrical communication with said amplifier input,
- wherein said second feedback path has a second large-signal sinusoidal response,
- wherein at least one of said first large-signal sinusoidal response and said second large-signal sinusoidal response is a non-linear response.

43. (New) The amplifier circuit of claim 42 wherein said first point is separated from said second point by an impedance element.

44. (New) A non-linear amplifier circuit including:

- an amplifier;
- a first feedback loop for said amplifier; and
- a second feedback loop for said amplifier,
- wherein at least one of said first feedback loop and said second feedback loop includes a non-linear impedance element.

45. (New) The amplifier circuit of claim 44 wherein said non-linear impedance element is a diode.

46. (New) A signal processing circuit including:

- a nonlinear amplifier stage having an output;
- a shelf filter following said amplifier stage and receiving said output, wherein said shelf filter has a response characterized by
 - a first passband for a first range of frequencies, said first passband providing a first amplitude response,
 - a second passband for a second range of frequencies, said second passband providing a second amplitude response,
 - wherein said first amplitude response differs from said second amplitude response,
 - wherein said response of said shelf filter does not provide an amplitude response less than the lesser of said first amplitude response and said second amplitude response for a frequency between said first range of frequencies and said second range of frequencies.

47. (New) A signal processing circuit including:
- a filter having a passband, said filter including:
 - a first user-preset gain level for said passband; and
 - a second user-preset gain level for said passband; and
 - a switch allowing a user to switch between said first user-preset gain level and said second user-preset gain level.
48. (New) The circuit of claim 47 wherein at least one of said first user-preset gain level and said second user-preset gain level is set by varying at least one impedance.
49. (New) The circuit of claim 48 wherein said at least one impedance is varied using a potentiometer.
50. (New) The circuit of claim 47 wherein said switch is a double throw double pole switch.

51. (New) A tone control circuit including:

a filter having a passband characterized by:

a first user-adjustable gain setting, wherein said first user-adjustable gain setting is predetermined by a user; and

a second user-adjustable gain setting, wherein said second user-adjustable gain setting is predetermined by a user; and

a switch allowing a user to switch between said first predetermined user-adjustable gain level and said second user-adjustable gain level.

52. (New) The circuit of claim 51 wherein at least one of said first user-adjustable gain setting and said second user-adjustable gain setting is established by varying at least one impedance.

53. (New) The circuit of claim 52 wherein said at least one impedance is varied using a potentiometer.

54. (New) The circuit of claim 51 wherein said switch is a double throw double pole switch.

55. (New) A tone control circuit including:
- a filter having a passband,
 - wherein said filter provides
 - a first user-selectable gain level for said passband and
 - a second user-selectable gain level for said passband,
 - wherein said first user-selectable gain level differs from said second user-selectable gain level.
56. (New) The circuit of claim 55 wherein at least one of said first user-selectable gain level and said second user-selectable gain level is set by varying at least one impedance.
57. (New) The circuit of claim 56 wherein said at least one impedance is varied using a potentiometer.
58. (New) A tone control circuit including:
- a filter having a passband,
 - wherein said filter provides
 - a first user-selectable gain level for said passband and
 - a second gain level for said passband,
 - wherein said first user-selectable gain level differs from said second gain level.

59. (New) The circuit of claim 58 wherein said first user-selectable gain level is set by varying at least one impedance.

60. (New) The circuit of claim 59 wherein said at least one impedance is varied using a potentiometer.

61. (New) A tone control circuit including:
a filter having
a first user-selectable corner frequency and
a second user-selectable corner frequency,
wherein at least one of said first user-selectable corner frequency and said second user-selectable corner frequency is selected by engaging a capacitor.

62. (New) The circuit of claim 61 further including:
a first capacitor having a first capacitance value; and
a second capacitor having a different capacitance value from said first capacitance value,
wherein said first user-selectable corner frequency is selected by engaging said first capacitor and said second user-selectable corner frequency is selected by engaging said second capacitor.

63. (New) The circuit of claim 62 further including:
a switch, said switch allowing a user to alternatively engage said first capacitor
and said second capacitor.

64. (New) The circuit of claim 63 wherein said switch is a rotary switch.

65. (New) The circuit of claim 62 wherein one of said first capacitor and said
second capacitor is engaged to form an operating capacitor,
wherein an output signal is provided at an output of said operating capacitor,
wherein said output signal is amplified using an adjustable gain level.

66. (New) The circuit of claim 65 wherein said output signal is amplified
using a fixed gain level.

67. (New) A switch for use in a signal processing circuit for use with a
musical instrument, said switch including:
a first capacitor; and
a second capacitor, wherein both said first capacitor and said second capacitor are
individually selectable by a user to determine a user-selected capacitor,

wherein a signal representing the output signal of a musical instrument is passed through said user-selected capacitor.

68. (New) The circuit of claim 67 wherein said signal representing the output of a musical instrument is amplified using an adjustable gain level after passing through said user-selected capacitor.

69. (New) The circuit of claim 67 wherein said signal representing the output of a musical instrument is amplified using a fixed gain level after passing through said user-selected capacitor.